



# RESEARCH HIGHLIGHT

April 2005

Socio-economic Series 05-012

CA 1  
MH3  
-2005  
R012  
c.1  
GOVPUB

## THE IMPACT OF ZONING AND BUILDING RESTRICTIONS ON HOUSING AFFORDABILITY

As Canada's housing agency, CMHC has an ongoing interest in understanding a wide range of issues relating to housing, such as affordability and affordability problems. CMHC monitors international research developments in these areas and occasionally sponsors careful investigations of such developments. This highlight describes one such investigation.

In 2002 two prominent American economists co-authored a thought-provoking article on housing affordability. Professor Glaeser of Harvard University and Professor Gyourko of the University of Pennsylvania published a National Bureau of Economic Research working paper titled *The Impact of Zoning on Housing Affordability*. The authors begin their paper by arguing that in the absence of policies that artificially inflate housing prices, problems of housing affordability are really problems of insufficient income. Then they investigate the extent to which government policies have caused housing prices to be artificially inflated. The authors present evidence that suggests government policies have drastically inflated housing prices in certain, limited parts of the United States. This implies that the United States does not have a national housing affordability crisis—but rather a poverty crisis—which, in some areas, is exacerbated by artificially inflated housing prices. The distinction between housing affordability problems and income problems is important because optimal policy responses for each problem may be different.

Glaeser and Gyourko's article received widespread media in the United States and was published in an abridged format in the journal *Regulation*. Glaeser and Gyourko have since published a revised version of the article, with the revised title *Impact of Building Restrictions on Housing Affordability*, in the *Federal Reserve Bank of New York Economic Policy Review*.

Glaeser and Gyourko argue that zoning and other building restrictions effectively reduce the supply of developable land. By effectively reducing the supply of developable land, these restrictions push prices upward. It is a fundamental law of economics that prices rise when supply is scarce. This law is true regardless of whether the scarcity is intrinsic or the result of government policies such as zoning. Zoning rules can artificially constrain the supply of developable land and available lots in various ways. Minimum lots sizes—which are extremely common throughout much of the United States—effectively reduce the number of lots available for residential construction. Growth boundaries and greenbelts can do the same. Furthermore, a variety of other non-zoning building restrictions can have the same ultimate effect as reducing land supply and thus can also increase housing prices.

3 1761 116373192



Canada

CMHC SCHL  
HOME TO CANADIANS

Glaeser and Gyourko use several statistical techniques to examine the relationship between building restrictions, such as zoning, and house prices. Comparisons between home prices and construction costs are key to their analysis. The authors measure the divergence between home prices and construction costs in a large number of American cities and suburban areas. They find that home prices are close to construction costs throughout much of the United States, but are substantially higher than construction costs throughout parts of the Northeast and the West Coast.

After measuring differences between home prices and construction costs, Glaeser and Gyourko investigate why these differences exist. They suggest two possible causes, both of which relate to the price of developable land and lots: First, the demand for land may be particularly great in some areas. Second, zoning and other building restrictions may be particularly onerous in some areas. The authors use a variety of advanced, statistical techniques to determine which explanation plays a bigger role. They find that “in places where housing is quite expensive, building restrictions appear to have created these high prices.” Based on this finding, Glaeser and Gyourko recommend: “If policy advocates are interested in reducing housing costs, they would do well to start with zoning reform.”

Glaeser and Gyourko focus on the United States. They use American data to estimate the impact of building restrictions in the United States. Nonetheless, there is reason to believe that their work may have some relevance to Canada and other countries. Essentially, Glaeser and Gyourko base their work on the fundamental law of economics that prices rise when supply is scarce. This law is generally as true in Canada as it is in the United States. Thus it is reasonable to suspect that Glaeser and Gyourko’s findings—if valid with respect to the United States—may have some relevance to Canada. To better understand the relevance of Glaeser and Gyourko’s work to Canada, CMHC hired Professor Somerville of the Sauder School of Business at the University of British Columbia.

Professor Somerville was charged with three related tasks. First, he was asked to help CMHC understand how the work of Glaeser and Gyourko relates to other research on the topics of land use regulation and housing affordability. Second, Somerville was asked to examine the robustness of the results obtained by Glaeser and Gyourko. Would these authors have obtained dramatically different results if they had used different data or made slightly different assumptions? Third Somerville was asked to relate Glaeser and Gyourko’s work to Canada.

Somerville begins his discussion by agreeing with Glaeser and Gyourko’s key thesis that “government land use regulations distort housing market outcomes [and] these distortions raise the price of housing above what it might otherwise be.” He also agrees with the proposition that in the absence of policies that artificially inflate housing prices, problems of housing affordability are really problems of insufficient income. Somerville makes various comments and criticisms regarding the exact methods and data used by Glaeser and Gyourko. He addresses his concerns by redoing some of Glaeser and Gyourko’s work using slightly different methods and data. He obtains results that are qualitatively similar to those obtained by Glaeser and Gyourko. In general, Somerville finds the results of Glaeser and Gyourko to be robust.

Although Somerville concurs with much of the Glaeser and Gyourko analysis, he draws attention to two important limitations of their study. First, Glaeser and Gyourko do not fully address the benefits associated with zoning and other land use regulations. Thus their work should not be viewed as meaning these regulations are all bad. Rather, their work merely suggests that policy makers and housing advocates should be aware of both the good and the bad impacts caused by regulating land use. Second, Glaeser and Gyourko focus solely on affordability as measured through home prices; they do not focus on rents or rental markets. This does not mean that their work does not apply to rental markets; it does. Equilibrium in the market for real estate assets demands a strong correlation between rents and house prices. However, this connection can breakdown when considering particular segments of the housing market. Thus, some caution is required in translating Glaeser and Gyourko's results to rental markets.

It is also difficult to translate Glaser and Gyourko's results to Canada. The main reason for this difficulty is that Canadian researchers do not have as much statistical information about Canada as American researchers have about the United States. Somerville suggests that Canada should gather and publish more detailed information about its housing stock. Moreover, Somerville argues that Canada should develop a set of measures chronicling the types of land use regulations that are imposed in specific localities. These measures should capture not only whether a specific type of regulation is imposed in a specific area, but also the extent to which it is enforced. Without these measures, it is impossible to empirically measure the effects of zoning and land use regulations on housing affordability in Canada.

**CMHC Project Manager:** Steven Ehrlich

**Consultant:** Professor Tsur Somerville,  
Sauder School of Business, University of British Columbia

### **Housing Research at CMHC**

Under Part IX of the *National Housing Act*, the Government of Canada provides funds to CMHC to conduct research into the social, economic and technical aspects of housing and related fields, and to undertake the publishing and distribution of the results of this research.

This fact sheet is one of a series intended to inform you of the nature and scope of CMHC's research.

To find more *Research Highlights* plus a wide variety of information products, visit our Web site at

**[www.cmhc.ca](http://www.cmhc.ca)**

or contact:

Canada Mortgage and Housing Corporation  
700 Montreal Road  
Ottawa, Ontario  
K1A 0P7

Phone: 1 800 668-2642  
Fax: 1 800 245-9274

**OUR WEB SITE ADDRESS:** [www.cmhc.ca](http://www.cmhc.ca)

Although this information product reflects housing experts' current knowledge, it is provided for general information purposes only. Any reliance or action taken based on the information, materials and techniques described are the responsibility of the user. Readers are advised to consult appropriate professional resources to determine what is safe and suitable in their particular case. Canada Mortgage and Housing Corporation assumes no responsibility for any consequence arising from use of the information, materials and techniques described.